5. (Amended) A process for producing the hexagonal lithium-cobalt composite oxide for a lithium secondary cell as defined in Claim 1, which comprises dry blending a cobalt oxyhydroxide powder having an average particle size of from 1 to 20 μm and a A_1 specific surface area of from 2 to 200 m^2/g, a lithium carbonate powder having an average particle size of from 1 to 50 μm and a specific surface area of from 0.1 to 10 m^2/g, and a powder of an oxide of metal element M having an average particle size of at most 10 μm and a specific surface area of from 1 to 100 m^2/g, and firing the mixture at a temperature of from 850 to 1,000°C in an oxygen-containing atmosphere.

7. (Amended) A positive electrode for a lithium secondary cell, which contains the A_2 hexagonal lithium-cobalt composite oxide for a lithium secondary cell as defined in Claim 1, as an active material.

9. (Amended) The positive electrode for a lithium secondary cell according to Claim 7, wherein the current collector is aluminum or stainless steel.

A_3 10. (Amended) A lithium secondary cell employing a positive electrode which contains the hexagonal lithium-cobalt composite oxide for a lithium secondary cell as defined in Claim 1, as an active material.